REMARKS

This Amendment is being timely filed, wherein the due date of February 28, 2009 falls on a Saturday. A Petition for Extension of Time is being concurrently filed.

Applicants thank the Examiner for the thorough consideration given the present application.

Status of Claims

Claims 1-7, 11, 12, 17-19, 21-27, 35, 36, 41-44 and 46-58 are pending, and claims 1 and 26 are independent. Claims 1-7, 11, 12, 17-19, 21-25 and 48-58 are withdrawn from further consideration. Claims 28-31 are currently cancelled and claims 8-10, 13-16, 20, 32-34, 37-40 and 45 were previously cancelled. Claims 26, 27, 35, 36, 41, 42 and 46 are amended. No new matter has been added. For instance, amended claim 26 is supported by the subject matter of original claims 26 and 31. Also, claims 27, 36 and 42 are amended as suggested by the Examiner to reflect minor informalities. The amendment to claims 35 and 46 are obviously minor in character (e.g., proper Markush group language). Claim 41 is amended to more clarify the subject matter therein, which is supported by at least page 17 of the present specification. Thus, no new matter has been added by way of the present amendments.

The Examiner is respectfully requested to reconsider the rejections in view of the following remarks.

Issue under 35 U.S.C. § 112, second paragraph

The Examiner has rejected claims 26-31, 35, 36, 41-44, 46 and 47 under 35 U.S.C. § 112, second paragraph due to indefiniteness. This rejection is respectfully traversed.

By way of the present submission, this rejection is overcome.

Issues under 35 U.S.C. §§§ 102(b), 102(e) and 103(a)

The Examiner has rejected claims 26-30, 35, 36, 41-43, 46 and 47 under 35 U.S.C. § 102(b) as being anticipated by Carrier et al. WO 99/49848 (hereinafter "D1").

Also, the Examiner has rejected claims 26-31, 35, 36, 41-44, 46 and 47 under 35 U.S.C. § 102(e) as being anticipated by Chung et al. US Publication 2006/0104999 (hereinafter "D2").

Further, the Examiner has rejected claims 26-31, 35, 36, 41-44, 46 and 47 under 35 U.S.C. § 103(a) as being obvious over Woo et al. WO 02/13815 (hereinafter "D3").

Lastly, the Examiner has rejected claims 26-31, 35, 36, 41-44, 46 and 47 under 35 U.S.C. § 103(a) as being obvious over D1.

These rejections are respectfully traversed.

The Present Invention and its Advantages

While not conceding to the Examiner's rejection, independent claim 26 has been amended to further emphasize the distinctions of the present invention. Specifically, claim 26 is directed to a mucoadhesive formulation for solubilization of insoluble drugs comprising 4 to 90 % by weight of at least one monoolein, 0.01 to 90 % by weight of at least one oil selected from the group consisting of triacetin, tributyrin, tricaproin, tricaprylin, tricaprin, triolein,

Lipiodol, iodized poppy seed oil, Ethiodol, iodized soybean oil, soybean oil, cottonseed oil, olive oil, poppy seed oil, linseed oil, sesame oil, squalane and squalene and 0.01 to 20 % by weight of at least one insoluble drug.

The claimed composition is characterized in that in order to solubilize the insoluble drugs and increase oral bioavailability when orally consumed, the present invention uses a specific oil with low viscosity and high solubility for lipophilic drugs and monoolein which can be absorbed directly without being digested on the mucosal cells. In particular, the claimed composition can solubilize the insoluble drags without adding a surfactant and a solvent. See at least page 3, line 19 to page 4, line 19 of the present specification.

Distinctions between the Present Invention and the Cited References

D1 (Carrier et al.)

There are two rejections in view of D1.

The cited D1 reference relates to pharmaceutical dosage forms for anticancer drug, and paclitxel in which the active drug is formulated as storage stable self-emulsifying preconcentrate. Particularly, in order to solubilize the anti-cancer drugs, the D1 composition comprises hydrophobic components, hydrophilic components and surfactants as main components. See Claim 1 of the D1 reference.

However, the claimed composition is patentably distinct from the D1 composition. Specifically, the claimed composition does not comprise surfactants and hydrophilic components as major components and instead the claimed composition is directed to

employing a monoolein together with specific oil. On the contrary, the D1 composition does not require or comprises monoglyceride with triglyceride. Also, Dl remains silent about any Examples supporting the composition comprising a monoolein. Further, the claimed composition includes 0.01 to 20 % by weight of other insoluble drugs besides anti-cancer drugs while the D1 composition does not.

In addition, the D1 composition is only effective for the solubilization of anticancer drugs. However, the claimed composition is effective for the solubilization of insoluble drugs (including anticancer drugs), as well as for increasing oral bioavailability when the composition is orally consumed. This is because the claimed monoolein can be absorbed directly without being digested on the mucosal cells, and therefore can carry the drug with it. In contrast, since the D1 composition includes hydrophilic components, the components of D1 can be destabilized due to oxidation and/or hydrolysis, the insoluble drugs can precipitate out with lapsing of time, and the administration dose would increase as the amount of added water increases. In this respect, Applicants respectfully refer the Examiner to page 5, lines 1-5 of the present specification.

Although a monoolein and triglyceride are referred to as hydrophobic components in the present specification, D1 fails to disclose or suggest any experiment or its supportive data coveringa combined use of monoolein with specific oil and its favorable effects. Indeed, D1 is an incomplete invention and the D1 composition cannot be compared directly with the claimed composition.

As discussed above, the two compositions are totally different in their components. In particular, the components in the compositions mainly increase the solubility of the insoluble drugs. Also, the claimed composition is increases oral bioavilability of the drug.

Therefore, the claimed composition is neither anticipated by nor rendered obvious over the disclosure of the cited D1 reference. Reconsideration and withdrawal of the rejections in view of D1 are respectfully requested.

D2 (Chung et al.)

To address this rejection, Applicants herein attach a 37 C.F.R. § 1.132 Declaration establishing that any invention disclosed but not claimed in the D2 reference was derived from the inventor of the present application and thus is not an invention "by another."

Thus, the § 102(e) rejection is moot. Reconsideration and withdrawal of the rejection in view of D2 are respectfully requested.

D3 (Woo et al.)

D3 relates to an oral composition comprising a drug and a verapamil derivative which does not cause any adverse side effects. Particularly, in order to increase oral bioavailability when orally consumed, the D3 composition comprises a verapamil derivative as a *p*-glycoprotein inhibitor.

Thus, the claimed composition is totally different from the D3 composition in terms of the mechanism for increasing of oral bioavailability. Specifically, in order to increase oral bioavailability, the present invention adds a monoolein component. As mentioned, the

monooein component can be absorbed directly without being digested on the mucosal cells and therefore can carry the drug with it, together with specific oil. Instead, the D3 reference adds a verapamil derivative for inhibiting *p*-glycoprotein which inhibits absorption of the insoluble drugs. Adding *p*-glycoprotein inhibitors as in the D3 reference makes it possible to cause drug-drug interaction. This can be also confirmed at page 202, right column, lines 8-12 of the Attachment No. 3 (Kruijtzer *et al.*).

Further, the claimed composition does not comprise a verapamil derivative, surfactants and other additives as major components, which is distinguishable from the D3 composition.

Although a monoolein is referred to as a surfactant and oil in the D3 reference, D3 fails to disclose or suggest combined use of monoolein with specific oil and any example or experimental data covering any favorable effects.

As stated above, although it is not possible to directly compare the D3 composition with the claimed composition, it is evident that the two compositions are totally different in terms of their components and the mechanism for increasing of oral bioavailability. In addition, the method of adding p-glycoprotein inhibitors as in D3 makes it possible to cause drug-drug interaction. Therefore, the claimed in the present application cannot be easily expected from D3.

Reconsideration and withdrawal of the rejection in view of D3 are respectfully requested.

Non-statutory Double Patenting Rejection

Claims 26-31, 35, 36, 41-44, 46 and 47 are provisionally rejected on the ground of nonstatutory obviousness double patenting over claims 33, 37, 38, 42, 43, 48-51, 65 and 74 of copending U.S. application No. 10/521,669. Also, claims 26-31, 35, 36, 41-44, 46 and 47 are provisionally rejected on the ground of nonstatutory obviousness double patenting over claims 1-6, 10, 11 and 16-19 of copending U.S. application No. 10/521,695.

These provisional rejections are respectfully traversed.

Applicants submit that U.S. application No. 10/521,695 was abandoned and thus this provisional rejection is rendered moot. Also, regarding copending U.S. 10/521,669, it is respectfully submitted that since this rejection is provisional for non-finalized claims between two applications, it is not necessary to respond to this rejection at this time.

CONCLUSION

In view of the above amendment, Applicant believes the pending application is in condition for allowance.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Kyung Sook Chang, Reg. No. 56,946, at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.147; particularly, extension of time fees.

Dated: March 2, 2009

Respectfully submitted,

By _____
Craig A. McRobbie
Registration No.: 42,874
BIRCH, STEWART, KOLASCH & BIRCH, LLP
8110 Gatehouse Road
Suite 100 East
P.O. Box 747
Falls Church, Virginia 22040-0747
(703) 205-8000
Attorney for Applicant

Attachments:

1. Abstract of this application
2. Declaration under 37 C.F.R. § 1.132
3. Kruijtzer *et al.*, "Weekly oral paclitaxel as first-line treatment in patients with advanced gastric cancer," *Annuals of Oncology,* 14 at pages 197-204 (2003)